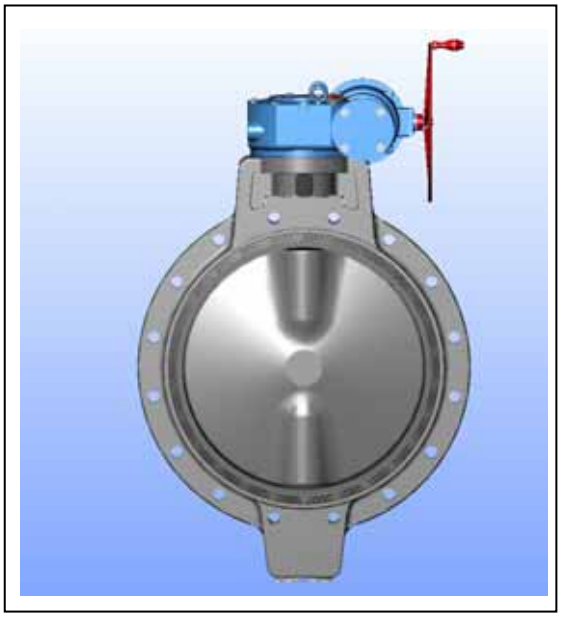
Serial No.	H – V037E – 1

PDCPD Butterfly Valve

700mm, 800mm, 900mm, 1000mm

User's Manual



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ASAHI *AV* VALVES

(1) General operating instructions

○ Operate the valve within the pressure Vs temperature range.
(The valve can be damaged by operating beyond the allowable range.)

○ Select a valve material that is compatible with the media, refer to "CHEMICAL RESISTANCE ON ASAHI AV VALVE".
(Some chemicals may damage incompatible valve materials.)

○ Do not use the valve on condition that fluid has crystallized.
(The valve will not operate properly.)

○ Do not step on the valve or apply excessive weight on valve. (It can be damaged.)

○ Do not exert excessive force in closing the valve.

○ Make sure to consult a waste treatment dealer to dispose of the valves.
(Poisonous gas is generated when the valve is burned improperly.)

○ Allow sufficient space for maintenance and inspection.

○ Keep the valve away from excessive heat or fire. (It can be deformed, or destroyed.)

○ The valve is not designed to bear any kind of external load. Never stand on or place anything heavy on the valve at anytime.

○ Certain liquid such as H2O2, NaClO, etc may be prone to vaporization which may cause irregular pressure increases, which may destroy the valve.

(2) General instructions for transportation, unpacking and storage

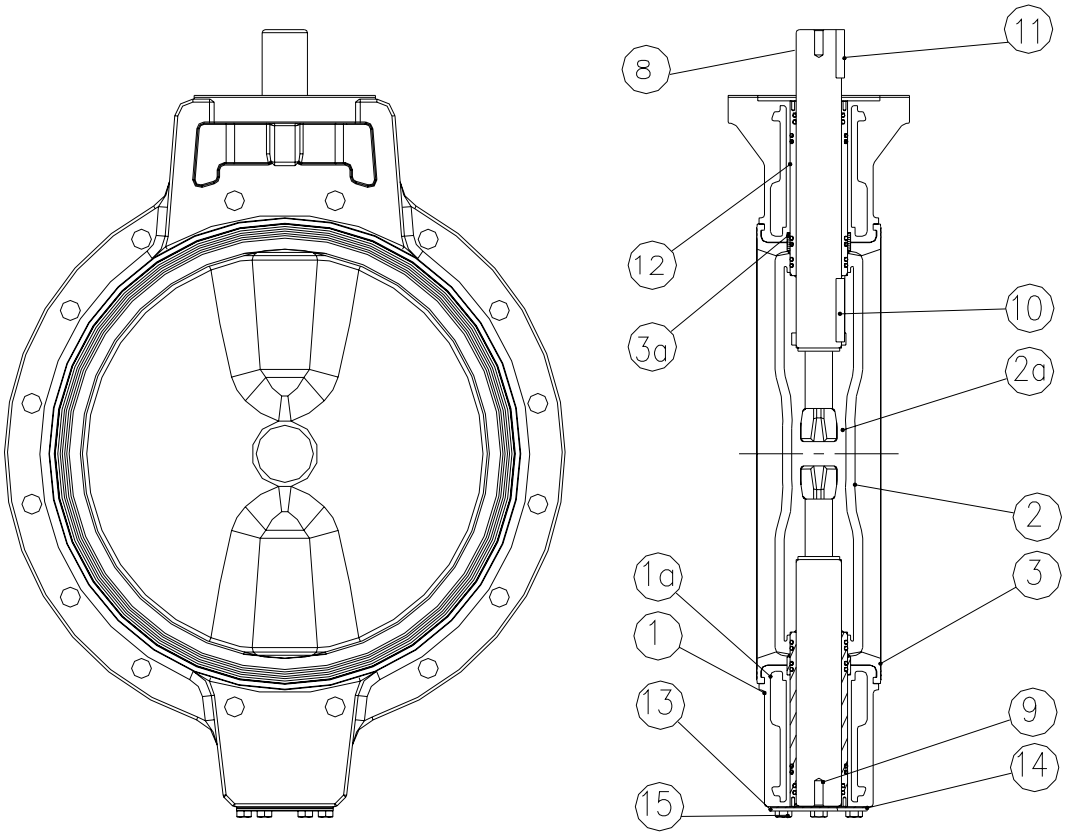
○ Keep the valve packed in the carton or box as delivered until installation.

○ Keep the valve away from any coal tar, creosote (antiseptic for wood), termite insecticide, vermicides, and paint.
(This could cause swelling damage the valve.)

○ Do not impact or drop the valve. (It can be damaged.)

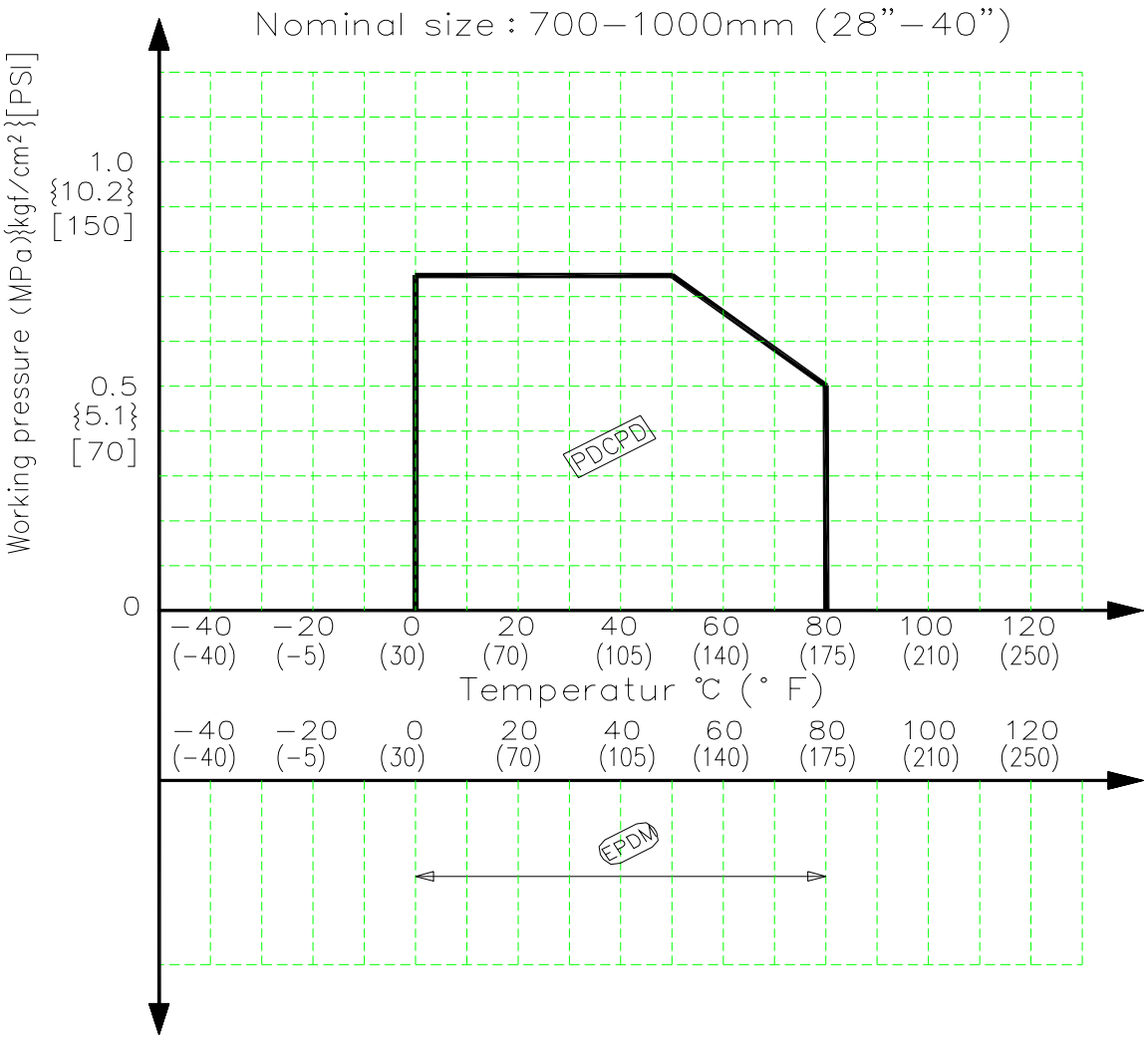
○ Avoid scratching the valve with any sharp object.

(3) Name of parts



No.	DESCRIPTION	No.	DESCRIPTION
①	Body	⑨	**Stem (B)**
⑴a	Inserted metal of body	⑩	Key (A)
②	Disc	⑪	Key (B)
⑵a	Inserted metal of Disc	⑫	BUSH
③	Seat	⑬	Stem holder
⑶a	Seat Ring	⑭	Gasket
⑧	Stem (A)	⑮	Bolt

(4) Comparison between operating temperature and pressure



Caution

Do not operate the valve beyond the range of the published working temperature and pressure.
(The valve can be damaged)

(5) Installation procedure

⚠ Caution

1) The valve disc is sent in the position indicated by. solid lines in Fig. 5-1 prior to shipment from the factory. If the valve is opened or closed after unpacking, it must be reset in this position before installation. Failure to do so will result in damage to the surface of the valve seat during handling and installation.
2) The valve most not be dropped or thrown against other objects, since the sealing surface of the disc and the sealing surface of the valve seat may easily be damaged.
3) Care must be used during piping installation to ensure that the pipes or flanges are properly aligned so that the valve disc dose not contacts them in any setting. Misalignment as in Fig.5-2 will result in damage to the valve.
4) The installed valve must never be opened or closed when foreign matter such as sand is present in the pipeline.

Fig. 5-1

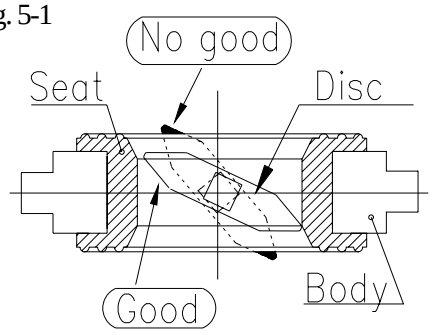
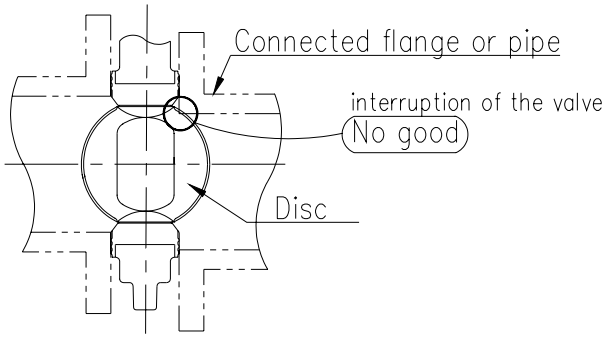
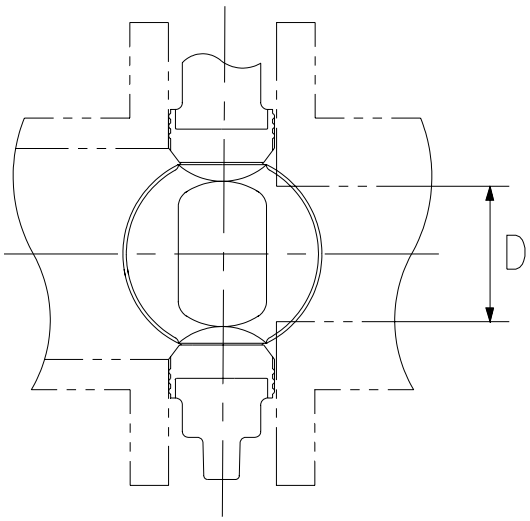


Fig. 5-2



In case of the thick wall of the connection part (flange and pipe) is too thick, shave the flange or the pipe inside in order to avoid the contact of pipe and disc. If inside diameter of the connection part is larger than size D, shaving is not necessity.

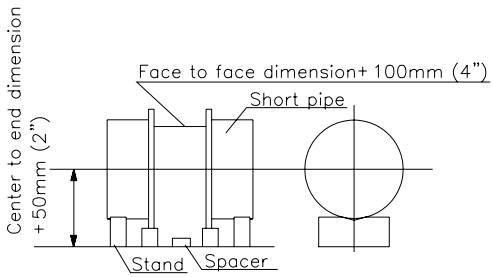


Nominal Size	Diameter D
700mm (28”)	661mm (26.02”)
800mm (32”)	756mm (29.76”)
900mm (36”)	860mm (33.85”)
1000mm (40”)	948mm (37.32”)

1) Set the short pipes.

Set the short pipes with suitable stands so that the center of the valve in the upright position aligns with that of the short pipe. Using a cloth, wipe foreign matter away from the flange surfaces of the short pipes.

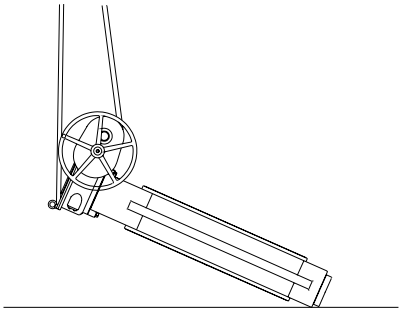
Fig.1



2) Stand the valve upright.

Wind the nylon sling around the head part of the body and gradually raise it up. After standing the valve upright, wipe foreign matter away from the seat with a cloth.

Fig.2

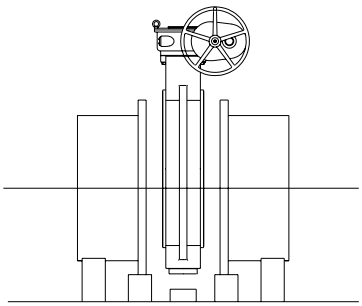


Caution

Lift the valve up by looping a belt around the gearbox. Like Fig 2. The eyebolt in the gearbox is designed to support the weight of gearbox (about 500kg), so avoid lifting up the whole valve with the eyebolt. Use it just as a support to stand the valve upright.

3) Lower the valve gradually between the short pipes on to the spacer.

Fig.3



Lower the valve carefully without damaging the flange surfaces of short pipes
The face to face dimension of valves is as below.
Make sure that the valve is closed.

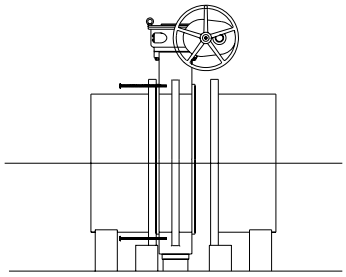
Unit; mm (inch)

Nom. Size mm(inch)	Dimension mm(inch)
700 (28")	210 (8.28)
800 (32")	240 (9.45)
900 (36")	240 (9.45)
1000 (40")	300 (11.81)

4) Connect the valve temporary with one of short pipes.

Match the bolt hole of the short pipe with that of the valve, and put four stud bolts into the inserted metal parts, then tighten nuts lightly with hand.

Fig.4



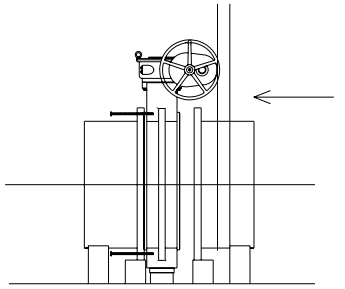
5) Set another short pipe with the valve.

Loop the short pipe and tighten nuts as the same procedure as 4.

6) Put the bolts into the penetrated bolt holes and plumb in.

Move the pipe gradually to match holes one another, and set nuts.

Fig.5



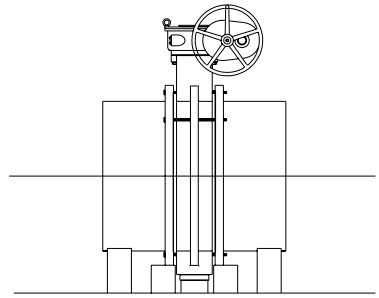
⚠ Caution

Tighten the bolt-nuts of the valve and the flange on the penetrated bolt at first, and then tighten the bolt-nuts on the inserted metal parts.

7) Tighten the nuts.

Tighten the nuts in a diagonal manner.
All penetrated bolts should be tightened first, and the inserted metal parts will be tightened after.

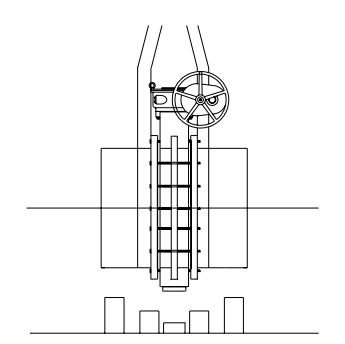
Fig.6



Nom. Size mm(inch)	Bolt tightening torque N-m(kgf-cm)
700,800 (28",34")	130 (1,300)
900, 1000 (36", 40")	170 (1,700)

8) Using the nylon sling, lift up around the flange sides of both short pipes to set in the required position. Hook a wire on the eyebolt so that the whole valve can not be turned.

Fig.7



(6) Operating procedure

⚠ Caution

The handle must be operated by hand.

Turn the handle gently to open or close.
Check the travel indicator on the top of the gearbox, and turn the handle.

Right turn (Clockwise) → Shut direction

Left turn (Counter clockwise) → Open direction

(7) General instructions for fluid flowing

1) Make sure that any foreign matter is not in the pipe, which may damage the valve seat before fluid flowing. Open the valve fully when the fluid starts flowing.

2) Although the sealing adjustment of disc is already adjusted, if the valve leaks during operation, loosen the stopper bolt in the actuator and find the volume of tightening.

(8) Inspection items

○ Inspect the follow items;

(1)	Check for any flaw, crack, or deformation on the outside.
(2)	Check whether fluid leaks to the outside.
(3)	Check whether there are protrusion or retirement of seat.
(4)	Check the smoothness of handle operation.

(9) Troubleshooting

Problem	Cause	Treatment
The valve does not operate smoothly.	The protrusion of the seat. The uneven or excessive tightening of the bolt.	Loosen the bolt and adjust.
Fluid is not stopped in the full closed position.	The stopper is not adjusted properly.	Adjuster the stopper.
	The seat is damaged or worn.	Replace the seat.
	Foreign matter is in the valve.	Disassemble the valve and clean. (Refer to page 4,5)
	The disc is damaged or worn.	Replace the disc.
	The connecting bolts are too much tightened or tightened unevenly.	Reset the valve. (Refer to page 4,5)
Fluid leaks to the outside.	The seat is damaged or worn.	Replace the seat.
The handle does not work smoothly.	Foreign matter is adhered.	Reset the valve. (Refer to page 4,5)
	The gearbox is damaged.	Replace the gearbox.
	The connecting bolts are too much tightened.	Reset the valve. (Refer to page 4,5)
The valve does not operate.	The gearbox is damaged.	Repair or replace.
	The stem is damaged.	Replace the stem.

(10) Handling of residual and waste materials

⚠ Caution

In discarding remaining or waste materials, be sure to ask waste service company.

(11) Inquiries

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Distributor

PDCPD Butterfly Valves
700mm, 800mm, 900mm, 1000mm

ASAHI *AV* VALVES

Information in this manual is subject to change without notice. 2004.8